Name_____ Date _____

1.4 Notetaking with Vocabulary (continued)

Extra Practice

In Exercises 1–3, solve the system using the elimination method.

1. $x + 2y - 3z = 11$
$2x + y - 2z = 9$
$4x + 3y + z = 16$

2. $x - y + 3z = 19$
$-2x + 2y - 6z = 9$
$3x + 5y + 2z = 3$

3. $x + y - z = -9$
$2x - 3y + 2z = 13$
$3x - 5y - 6z = -15$

In Exercises 4–6, solve the system using the substitution method.

4. $x + y + z = 4$
$x + y - z = 4$
$3x + 3y + z = 12$

5. $2x + 3y - z = 9$
$x - 3y + z = -6$
$3x + y - 4z = 31$

6. $x + 2y - 5z = -12$
$2x + 2y - 3z = -2$
$3x - 4y - z = 11$

7. You found \$6.60 on the ground at school, all in nickels, dimes, and quarters. You have twice as many quarters as dimes and 42 coins in all. How many of each type of coin do you have?

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1.4 Notetaking with Vocabulary (continued)

8. Find the values of a, b, and c so that the linear system below has $(3, -2, 1)$ as its only solution. Explain your reasoning.

$$\begin{aligned} 3x + 2y - 7z &= a \\ x + 3y + z &= b \\ 4x - 2y - z &= c \end{aligned}$$

9. Does the system of linear equations have more than one solution? Justify your answer.

$$\begin{aligned} \tfrac{1}{2}x - \tfrac{3}{8}y + \tfrac{1}{8}z &= -\tfrac{5}{4} \\ \tfrac{1}{2}x + \tfrac{1}{4}y + \tfrac{3}{4}z &= 0 \\ -x + 2y - 5z &= 17 \end{aligned}$$

10. If $\angle A$ is three times as large as $\angle B$, and $\angle B$ is 30° smaller than $\angle C$, what are the measures of angles A, B, and C?